

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

CLAIM

What is claimed is:

1. (Currently Amended) A method, comprising controlling packet loss within a congested network by setting packet bandwidths over selected communication links within the network at one or more control points thereof, such packet bandwidths being set at critical values determined by monitoring congestion on one or more communication links of the network downstream from the control points: and wherein the critical values are determined according to a period sweep which is performed using a monotonically decreasing function.

2 - 4. (Canceled)

5. (Original) The method of claim 1 wherein the packet bandwidths are set by varying an inter-packet delay time over the selected communication links at the control points.

6. (Currently Amended) A method, comprising monitoring buffer occupancy level at a control node of a network as packet present output rate from the control node is decreased monotonically, and setting the packet output rate at a value corresponding to a phase transition point in the buffer occupancy level.

7 - 8. (Canceled)

9. (Original) The method of claim 6 further comprising periodically determining whether the phase transition point has changed relative to the packet output rate and resetting the packet output rate accordingly.
10. (Original) The method of claim 6 wherein the phase transition point corresponding to a change in buffer occupancy from a normal level to a level at or near a maximum buffer capacity.
11. (Currently Amended) A method, comprising setting an inter-packet transmission time for a control node in a network ~~according to a point corresponding to a phase transition in a~~ buffer occupancy levels in the control node, wherein the phase transition point is determined by monitoring the buffer occupancy level for variable inter-packet transmission times and the inter-packet transmission times are varied according to a decreasing function.
12. (Canceled)
13. (Currently Amended) The method of claim ~~12~~ 11 wherein the phase transition corresponds to a change in buffer occupancy from a nominal level to a level at or near a maximum buffer capacity.
14. (Currently Amended) The method of claim ~~12~~ 11 further comprising resetting the inter-packet transmission time according to variation in the phase transition point.
- 15 - 17. (Canceled)

18. (Currently Amended) The method of claim ~~17~~ 11 wherein the function decreases monotonically.

19. (Currently Amended) The method of claim ~~17~~ 11 wherein the function comprises an exponential function.

20. (Original) The method of claim 18 wherein the function comprises an exponential function.

21. (New) A method, comprising setting an inter-packet transmission time for a control node in a network to a point corresponding to a phase transition in a buffer occupancy levels in the control node, wherein the phase transition point is determined by monitoring the buffer occupancy level for variable inter-packet transmission times and the inter-packet transmission times are varied according to one of: an algorithm search process, a search process that sweeps from high inter-packet transmission times to low inter-packet transmission times, or a search process that sweeps from low inter-packet transmission times to high inter-packet transmission times.